

## **REMARKS**

The Applicants respectfully request reconsideration in view of the following remarks. No claims are amended. Accordingly, claims 1-24 are pending in the application.

### **I. Election of Claims**

The Applicants note the Examiner's acknowledgement of the election of Group 1 – Claims 1-24 without traverse in the reply filed on 3/28/2007. Therefore, claims 29-35 are withdrawn from consideration as noted by the Examiner.

### **II. Claims Rejected Under 35 U.S.C. § 101**

Claims 1-24 rejected under 35 U.S.C. § 101 because the invention is inoperative and therefore lacks utility.

In regard to the §101 rejection of claims 1-24, the Examiner asserted on page 2 of the Office Action that the claims are inoperative and, as a result, lacks utility. In particular, the Examiner stated that there is no key exchange process or encryption protocol established between the discovery process and the registration process. In response, the Applicants submit that the exchange of keys occurs as the OLT multicasts a public key through the discovery gate message to be received by the ONT. For example, this is reflected in claim 1 as the elements of “sending a discovery gate message to discover an optical network unit for data transmission.” In turn, the ONT encrypts the session key using the public key of the OLT and sends the encrypted session key to the OLT to enable decryption of the messages encrypted by the ONT's session key. See Specification page 10, lines 3-10. This is recited in claim 1 as the elements of “said optical network unit for receiving said discovery gate message and then sending . . . an encrypted registration acknowledgement message to said optical line terminal to respond to said registration message.” Independent claim 14 recites similar elements to those discussed above for claim 1 and satisfy the utility requirement for the same reasons. In addition, dependent claims 2-13 and 15-24 also satisfy the utility requirement because these claims were rejected solely because of their dependencies on claims 1 and 14.

Moreover, in response to the Examiner's assertion that no encryption protocol is established, the Specification discloses that the RSA encryption algorithm is to be used between the OLT and ONT. See Specification page 19, lines 23-25. Therefore, when read in light of the Specification, the term "encrypted" as recited in the claims can be discerned as referring to, for example, encryption based on the RSA encryption algorithm.

Therefore, in light of these foregoing reasons, the Applicants believe that the claims meet the utility requirement under 35 U.S.C. § 101. Accordingly, reconsideration and withdrawal of the rejection of claims 1-24 are respectfully requested.

### **III. Claims Rejected Under 35 U.S.C. § 102**

Claim 1 rejected under 35 U.S.C. § 102(a) as being anticipated by Security Model and Authentication Protocol in EPON-based Optical Access Network, (hereinafter "Roh") by Roh and Kim, published as part of Transport Optical Networks, 2003, Proceedings of the 2003 5<sup>th</sup> International Conference on 29 June-3, July 2003 (volume 1). To establish an anticipation rejection the Examiner must show that the cited reference teaches each element of a claim.

In regard to the § 102(a) rejection of claim 1, Roh fails to teach the elements of "said optical network unit for receiving said discovery gate message and then sending *an encrypted registration request message* to said optical line terminal" (emphasis added). Roh, instead, teaches that the OLT sends, presumably, an unencrypted REGISTER\_REQUEST message to the OLT for registration. This conclusion is supported by Roh because all messages exchanged between the OLT and the ONU are encrypted only after the OLT installs the session key sent from the ONU. See Roh, page 102, 1st paragraph. In addition, Roh fails to teach the elements of "an encrypted registration message including a permanent medium access control (MAC) address . . . and an encrypted general gate message including said permanent MAC address," as recited in the claim. Id. As a result, Roh fails to teach each element of claim 1. Accordingly, reconsideration and withdrawal of the rejection of claim 1 are respectfully requested.

#### IV. Claims Rejected Under 35 U.S.C. § 103

Claims 2-24 rejected under 35 U.S.C. § 103(a) as being unpatentable over Roh as applied to claim 1 above, and further in view of Cryptography and Network Security, by W. Stallings, 2<sup>nd</sup> Edition, 1999 (hereinafter “Stallings”).

According to MPEP §2142

[t]he key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in *KSR International Co. v. Teleflex Inc.*, 550 U.S. \_\_\_, \_\_\_, 82 USPQ2d 1385, 1396 (2007) noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Federal Circuit has stated that ‘rejections on obviousness cannot be sustained with mere conclusory statements; instead there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.’ *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006). See also *KSR*, 550 U.S. at \_\_\_, 82 USPQ2d at 1396 (quoting Federal Circuit statement with approval).

Further, according to MPEP §2143, “[T]he Supreme Court in *KSR International Co. v. Teleflex, Inc.* 550 U.S. \_\_\_, \_\_\_, 82 USPQ2d 1395-1397 (2007) identified a number of rationales to support a conclusion of obviousness which are consistent with the proper “functional approach” to the determination of obviousness as laid down in *Graham*.” Further, according to MPEP §2143.01, [o]bviousness can be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so. *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1335 (Fed. Cir. 2006). Further, “[t]he mere fact that references can be combined or modified does not render the resultant combination obvious unless the results would have been predictable to one of ordinary skill in the art.” *KSR International Co. v. Teleflex, Inc.* 550 U.S. \_\_\_, \_\_\_, 82 USPQ2d 1385, 1396 (2007). Additionally,

[a] statement that modification of the prior art to meet the claimed invention would have been “well within the ordinary skill of the art at the time the claimed invention was made” because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish *prima*

*facie* case of obviousness without some objective reason to combine the teachings of the references. *Ex parte Levengood*, 28 USPQ2d 1300 (Pat. App. & Inter. 1993).

In regard to dependent claims 2-13, these claims depend on base claim 1 and incorporate the limitations thereof. Therefore, for at least the reasons discussed in connection with claim 1, Roh fails to teach or suggest each element of claim 2-13. Further, the Applicants are unable to discern and the Examiner has not cited the portion of Stallings that teaches or suggests the missing elements of claim 1. Moreover, the assertions made in the Office Action on pages 5 and 6 that lead to a conclusion of obviousness are not explicit and the basic requirements of an articulated rationale under MPEP § 2142 cannot be found. Since neither Roh nor Stallings, and therefore, nor the combination of the two, teach, disclose or suggest all the limitations of claims 2-13, as listed above, these claims are not obvious over Roh in view of Stallings since a *prima facie* case of obviousness has not been met under MPEP §2142. Accordingly, reconsideration and withdrawal of the rejection of claims 2-13 are respectfully requested.

In regard to independent claim 14, this claim recites analogous limitations to those of claim 1. Therefore, for at least the reasons discussed in connection with claim 1, claim 14 is patentable over Roh. Further, the Applicants are unable to discern and the Examiner has not cited the portion of Stallings that teaches or suggests the missing elements of claim 14. Moreover, the assertions made in the Office Action on page 9 that lead to a conclusion of obviousness are not explicit and the basic requirements of an articulated rationale under MPEP § 2142 cannot be found. Since neither Roh nor Stallings, and therefore, nor the combination of the two, teach, disclose or suggest all the limitations of claim 14, as listed above, this claim is not obvious over Roh in view of Stallings since a *prima facie* case of obviousness has not been met under MPEP §2142. Thus, for at least these reasons, Roh in view of Stallings fails to teach or suggest each element of claim 14. In addition, dependent claims 15-24 would also not be obvious over Roh in view of Stallings for the same reason. Accordingly, reconsideration and withdrawal of the rejection of 14-24 are respectfully requested.

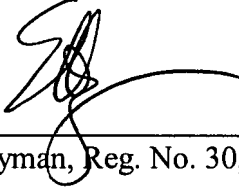
## CONCLUSION

In view of the foregoing, it is believed that all claims now pending patentably define the subject invention over the prior art of record, and are in condition for allowance and such action is earnestly solicited at the earliest possible date. If the Examiner believes that a telephone conference would be useful in moving the application forward to allowance, the Examiner is encouraged to contact the undersigned at (310) 207 3800.

Respectfully submitted,

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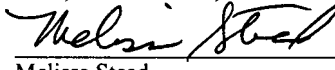
Dated: Oct 30, 2007

  
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### **CERTIFICATE OF MAILING:**

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